## PROGRAMMABLE THREE-WAY SWITCH MODEL TI054A-06-3W FOR ALL LIGHTING SYSTEMS

## MAXIMUM CHARGE MUST NOT EXCEED 500 W / 230 V

The TI054A-06-3W three-way switch MAY be installed on EITHER of the following lighting systems:

- Incandescent
- Halogen
- Low voltage halogen with transformer
- Fluorescent

It must not be installed on a motor or a charge exceeding 500 W .

## INSTALLATION

This programmable switch may be used in either a single pole or a multiple pole switch installation.
Multiple pole switch installations with an electronic switch are different from conventional installations. Read the wiring instructions carefully and select the one that applies to your situation.
You must follow the steps in the indicated order at all times:
Note: Please note that the two (2) " C " terminals on the programmable switch have no polarity. They can both be used indiscriminately.

1. Cut the power supply at the main circuit breaker in order to avoid the risk of electrical shock.
2. Remove and disconnect all existing three-way or regular switches. In the case of a three-way switch, identify the wire connected to the "C" or "common" terminal.
3. Connect each wire, as it is disconnected, to the programmable switch following the appropriate wiring diagram.
4. Close the main circuit breaker to reinstate the power supply.

## FOR A SINGLE POLE INSTALLATION

For a single pole installation no wire is connected to terminal " 1 ".


## FOR AN EXISTING THREE-WAY SWITCH INSTALLATION

To replace a conventional three-way switch by a programmable one, follow the following wiring diagram:


The "common" wire (phase) that you identified while removing the existing three-way switch must be connected to one of the two "C" terminals on the programmable switch. Connect the other two wires (black) to the remaining two terminals on the programmable switch. The connecting wire supplied will be added to the remote three-way switch between the "common" terminal and the black wire connected to terminal " $C$ " on the programmable switch. Once the connection is completed, correctly install the switches in their own electrical box and close the main circuit breaker to reinstate the power supply.

## FUNCTION CHECK

Refer to the "START-UP" section to start the programmable switch. Try to activate the lighting using the remote switch and the programmable switch. If everything is in working order, the installation is complete. Otherwise, cut the power supply at the main circuit breaker and reconnect the connecting wire on the remote switch between the "common" terminal and the other terminal.

## FOR A NEW THREE-WAY INSTALLATION

For a new installation, you may use a single pole switch at the remote location. Use the following wiring diagram:

Note: Note that the connecting wire supplied is not used in this installation.


## START-UP

For the first trial under power, use a paper clip to push on the R button. You should see the figures 0:00 flashing on the screen.

If nothing appears on the screen, check the following points:
a) The programmable switch fuse may not be installed properly or may be defective.
b) If the programmable switch controls a lamp with its own switch, make sure that the latter is always "ON".


## OPERATING MODES

The programmable switch offers two operating modes: MANUAL and AUTOMATIC.

In MANUAL mode, it operates as a conventional switch. You can then turn the light "OFF" or "ON" by pressing on the door. The screen displays "MAN" and the status of the light ("ON" or "OFF").

In AUTOMATIC mode, the switch runs the recorded program. To activate this mode, press on the door (approximately 3 seconds) until "AUTO" is displayed. The screen displays the active program number as well as its "ON" or "OFF" status.

To temporarily override the programming, simply press on the door. The new status of the light flashes to indicate that this status is temporary.
To exit the "AUTO" mode, press on the door (approximately 3 seconds) until "MAN" is displayed.

## DEFINITION OF YOUR CITY'S PARAMETERS

Before programming your switch, complete the following table by answering the questions:

| Latitude | Longitude$\quad$DAY \#$\quad$nor/Ad |
| :--- | :--- |

1) LATITUDE \& LONGITUDE: What are the latitude and longitude of your residence? Identify the city closest to yours in the table. If none is listed in the table, this information is usually available on road maps (latitude: horizontal lines and longitude: vertical lines).

Ex.: Paris 48,2; means Latitude 48 N and Longitude 2 E .
Note that SOUTH latitudes and WEST longitudes are indicated with a minus sign. The maximum latitude is $+/-65^{\circ}$.
2) DAY \# : What is the day of the year?

Add the month code (see table below) to the day's date.
Ex.: If today is June 24th:
DAY \# = $151+24=175$

| P1 | ON | $21: 50$ | Sundown |
| :--- | :--- | :--- | :--- |
| P1 | OFF | $--:--$ | free |
| P2 | ON | $--:--$ | free |
| P2 | OFF | $5: 58$ | Sunrise |


| January | 0 | July | 181 |
| :---: | :---: | :---: | :---: |
| February | 31 | August | 212 |
| March | 59 | September | 243 |
| April | 90 | October | 273 |
| May | 120 | November | 304 |
| June | 151 | December | 334 |

3) nor/Ad : Does your country use daylight saving time (advanced time) in the summer? If so, in which period of the year are you?
Ex. : In France, on June 24th, we are in daylight saving time (Ad). nor/Ad = Ad

| P1 | ON | $20: 38$ | Sundown |
| :--- | :--- | :--- | :--- |
| P1 | OFF | $22: 00$ |  |
| P2 | ON | $5: 00$ |  |
| P2 | OFF | $5: 10$ | Sunrise |

LC: Does your country follow the rules of the standard time according to its position in relation to Greenwich or has it set the time in a more practical way?
Since this programmable switch can be used anywhere in the world, it is based on the universal time ( 24 time zones, each increasing by one hour toward the East starting at Greenwich). For practical reasons however, some time zones have been redefined (in order to respect a frontier or for reasons of economy).
In this case, to remain compatible with the universal time, you need to enter a local correction factor.
Ex:Since the second world war, France has adopted Central European time (GMT+1). Thus, its local correction factor will be:

$$
\mathrm{LC}=1
$$

## SETTING THE TIME

1. Lift the lower side of the door with a flat screwdriver.
2. Set the time by pressing on the HOUR and MIN buttons.
3. Press on one of the SAVE buttons to record the time and return to the MANUAL or AUTOMATIC operating mode.

## RECORDING YOUR PARAMETERS

Now, you only need to program the parameters previously defined into your programmable switch.

Note: If you make a mistake while entering data, select the ill-defined parameter again using the "code" button and make the appropriate correction.

1. Press once on the CODE button.

- The screen displays "Latitude 00".
- Use the HOUR and MIN buttons to enter your latitude.

2. Press again on the CODE button.

- The screen displays: "Longitude 000".
- Use the HOUR and MIN buttons to enter your longitude.

3. Press again on the CODE button

- The screen displays "Day \# 000".
- Use the HOUR and MIN buttons to enter the day \#.

4. Press again on the CODE button.

- The screen displays "nor" (normal).
- Use the MIN button to switch from Standard time ("nor") to Daylight-Saving time ("Ad").

5. Press again on the CODE button.

- The screen displays "LC 0".
- Use the MIN button to enter the local correction factor.

You have now completed the setting of your parameters. Press on one of the SAVE buttons to record your parameters and return to the MANUAL or AUTOMATIC operating mode.

## DEFINING YOUR PROGRAMS

1- This switch can memorize 2 "ON/OFF" programs which repeat themselves every day.
If you have entered your city's parameters, the programs "P1 ON" and "P2 OFF" represent sundown and sunrise hours. Our example shows these results.
If your switch is set at "AUTO", your lights will go on at sundown and go off at sunrise.

2- If you wish your lights to go on at sundown but go off for example at 23:00, enter program "P1 OFF - 23:00".
Furthermore, if you wish your lights to go back on at 5:00 AM and go off at sunrise, enter program "P2 ON - 5:00"

| nor | - Standard time <br> - Winter time |
| :--- | :--- |
| Ad | - Daylight-saving time <br> - - Summer time |

Note that the "P1 OFF" and "P2 OFF" programs have priority on the "P1 ON" and "P2 ON" programs respectively.

If, for example, the sun rises at 4:58 ("P2 OFF") and you request in "P2 ON" that the lights go on at 5:00, the lights will not go on that morning.

3- If you wish to replace the "sundown" and/or "sunrise" programs by a fixed hour, select the "P1 ON" or "P2 OFF" programs and enter new parameters using the HOUR and MIN buttons.

## SAVING YOUR PROGRAMS

1- Press on the PGM button to select the program.
2- Use the HOUR and MIN buttons to modify the program.
3- Press on the CODE button to return to the initial value.

$$
\begin{array}{ll}
\text { P1 ON }=\text { Sundown } & \text { P1 OFF }=--:-- \\
\text { P2 ON }=--:-- & \text { P2 OFF }=\text { Sunrise }
\end{array}
$$

4- Press on the SAVE button to record your modifications and return to the MANUAL or AUTOMATIC operating mode.

## TO SWITCH FROM STANDARD TIME TO DAYLIGHT-SAVING TIME

If your country uses daylight-saving time, execute the following procedure when the time changes:

1- Press 4 times on the CODE button to select the "nor/Ad" mode.
2- Use the MIN button to switch from the "nor" (Standard) mode to the "Ad" (Daylight-saving) mode and vice versa.

3- Press on the SAVE button to return to the MANUAL or AUTOMATIC operating mode.

The programmable switch will automatically adjust the clock and the sundown/sunrise table for the period of the year. You do not need to adjust the clock manually.

## MEMORY PROTECTION

The programmable switch is equipped with a rechargeable battery that will protect your program recordings during a power failure.

Note that the screen is not ON during power outage.

CHARACTERISTICS

| Model: | TIO54A-06-3W |
| :--- | :--- |
| Supply: | $240 \mathrm{VCA}, 50 / 60 \mathrm{~Hz}$ |
| Load: | 15 watts min., 500 watts max. |
| Approvals : | CE |
| Storage temperature range: | -20 to $50^{\circ} \mathrm{C}$ |
| Operating temperature range: 0 to $50{ }^{*} \mathrm{C}$ |  |
| Max. latitude: | $+/-65^{\circ}$ |
| Precision of the solar table: | $+/-11$ min. (max. error near the Poles) |


|  | LAT | LONG |
| :--- | :---: | :---: |
| GREECE | 39 | 22 |
| ATHENS | 37 | 23 |

## WARRANTY

## AUBE TECHNOLOGIES INC. ONE YEAR LIMITED WARRANTY

This product is warranted against material defects and workmanship in normal use for a period of one year, from the date of the original purchase from authorized dealers. Warranty does not cover transportation costs. Nor does it cover a product subjected to misuse or accidental damage.
This limited warranty is in lieu of all other warranties, obligations or liabilities expressed or implied by the company.
In no event shall AUBE Technologies inc. be liable for consequential or incidental damages resulting from installation of this product. Within this period, any product proven defective in normal use will be repaired or replaced, at AUBE's option, without charge for either parts or labour, provided that the defective product with the original sale receipt is returned to the original dealer or is shipped pre-paid, insured and addressed to:

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